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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/537,825

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Yasushi Tomioka

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01/09/2009

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EXAMINER

WU, SHEAN CHIU

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

01/09/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,825

Applicant(s)

TOMIOKA ET AL.

Examiner

Shean C. Wu

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-7, 11, 17 and 18 is/are rejected.
7) ☒ Claim(s) 8-10, 12-16 and 19-24 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 12 September 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 11 and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoneya et al. (US 6,242,060).

The reference discloses an active-matrix liquid crystal display device having a pair of substrates at least one of which is transparent, a liquid crystal layer disposed between the pair of substrates, a group of electrodes for applying to the liquid crystal layer an electric field substantially parallel to the substrate plane and a plural number of active elements being formed on one of the pair of substrates, and an alignment layer disposed between the liquid crystal layer and at least one of the pair of substrates. The alignment layer is a photo-reactive material layer, and the photo-reactive material layer is a photo-reactive alignment layer which has been subjected to linearly polarized light irradiation to selectively derive a photochemical reaction (see abstract). The reference further teaches that active elements provided in connection to electrodes (col. 2, lines 20-21). The alignment layer containing polyamic acid was synthesized in example 18 (see col. 24, line 41). Also, see the comparative example 11 on col. 30.

With respect to claim 2, the reference further discloses the polarized light transmission axis of one of the polarizers being arranged substantially parallel to the rubbing direction (alignment layer) and the transmission axis of the other polarizer arranged orthogonal thereto to provide the normally closed characteristics that give dark display with a low voltage and bright display with a high voltage (see col. 15, lines 40-50).

With respect to claims 3-7, the ingredients of the claims 3-6 are described in the reference examples 9 and 18-19. The 600 Å (60 nm) dense polyimide alignment layer is disclosed in the reference examples 13 and 14.

With respect to claim 11, the reference teaches that **tilt angle** can be easily approximated to 0° for the liquid crystal molecules on the surface whose alignment has been controlled by oblique evaporation of an inorganic material such as silicon oxide (col. 12, lines 50-61). In Fig. 1A, the groups of electrodes (pixel electrode 4 and common electrode 1), which common electrode is formed on a

With respect to claim 17, the reference teaches that the controlled **alignment** direction of the **liquid crystal** molecules is substantially the same at the two **interfaces** between said **liquid crystal** layer and said pair of substrates.

With respect to claim 18, the wavelength 248 nm was used in the comparative example 11. Therefore, the reference teaching anticipates the claimed invention.

Allowable Subject Matter

3. Claims 8-10, 12-16 and 19-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Applicant's arguments, see Remarks, filed 9/12/08, with respect to the rejections in the previous office action have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground of rejection is made in the section 2 above.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shean C. Wu whose telephone number is 571-272-1393. The examiner can normally be reached on 10:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kelly Cynthia can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shean C Wu/
Primary Examiner, Art Unit 1795

SCW